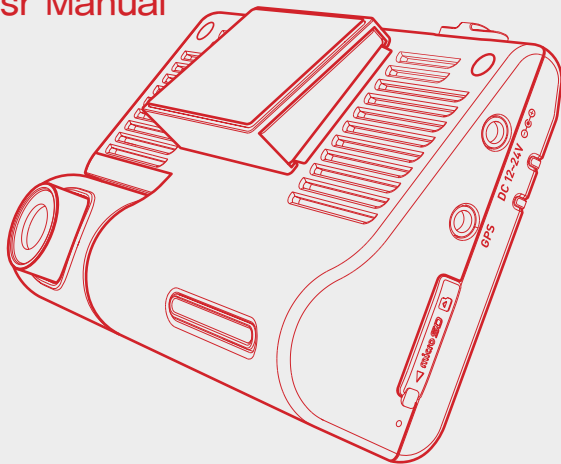


WINYCAM Vehicle Drive Recorder

X200FHD User Manual

www.winycam-eng.com



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1. Caution for Safety

- Do not operate the product during driving. It may cause accident.
- The product must be installed at a point which would not obstruct the driver's view.
- Do not allow unauthorized disassembly or alteration to the product. It may cause malfunction, and the consequent product damage will not be covered under the warranty.
- If the product is damaged or power is cut off by a serious accident, the product may not be able to record such event
- Always keep the windshield clean to enable clear recording.
- Since the product is purpose to record video data during driving, video quality may be deteriorated when in/out the tunnel, and at night or by contrast and backlight.
- Contaminated camera lens may deteriorate the video quality. Keep the lens clean.
- Do not place the product under direct sunlight or inside the closed vehicle as it may cause malfunction.
- Do not use chemicals or detergent to clean the product. Clean gently with soft cloth.
- Use of the product at temperature below -20°C or above 60°C may cause malfunction or breakdown. (This caution should be applied when product is unused.)
Caution on Operation and Storage
- Do not use the product in places in high temperature/humidity.



Caution on Operation and Storage

- Do not exert excessive force to the product (especially to LCD buttons and to bracket) as it may cause breakdown.
- Operate the product for 3–5 minutes to check for correct recording, before each use.
- Extended exposure to sunlight and high temperature in the summer may cause malfunction.
- Do not turn off power, or remove the SD card during firmware upgrading as it may cause malfunction.
- Do not touch the cigar lighter cable with wet hand as it may cause electric shock.
- Do not use a damaged cigar lighter cable as it may cause electric shock or fire.
- Do not place the cigar lighter cable in near heating devices.
- Do not leave the product connected to the cigar lighter if not in use for a long period of time. Remove the cable from the product.
- Insert the cigar lighter securely.
- Do not bend or pull the cigar lighter cable by excessive force, or place heavy objects on the cable.
(It may damage the cord and as a result it may cause electric shock or fire.)
- Do not touch the LCD excessive force as it may cause malfunction.



Caution on SD Card

- In order to confirm normal operation of the product, please check the image of a SD card and format it on a regular basis. (PC format needed one to two times per month)
- Because an SD card is consumables, if it is used for a long time, you may lose the data or may not record due to an error, so please check it periodically.
- When the product is in recording or the power is on, do not eject the SD card forcibly. It may cause a failure of the SD card and data loss.
- If temperature gets too high in the vehicle, data storing may be disabled, or data may be damaged. Park your vehicle in the shade in the summer.
- When identify the car's accident or damage, please keep the SD card separately. Due to overwrite, important data may be deleted.
- When turn off the power of the body and remove the SD card before LED is turned off, the last recording file may not be saved, so please be careful.
- When turn off the power of the body and remove the SD card before LED is turned off, the last recording file may not be saved, so please be careful.

- When driving a car, do not remove the SD card. Make sure to remove it safely when a car is in parking or stop.
- After turning on the power, make sure that it is in normal operation.
- Please note that the warranty period of an SD card is six (6) months, and replace it at the time of more than six (6) months. Please purchase and use SD Card that manufacture recommended specification.
- The SD card randomly purchased other than the one we provide, shall be excluded from the warranty, and we shall not take any responsibility for loss and damage of the data recorded in the SD card in any case.

2. Before Use

- Thank you for purchasing X200FHD
- This Manual contains important information about the proper use and cautions in use of the product. Please read carefully before use.
- X200FHD is an auxiliary product to alert users for safe driving and prevent accidents, by recording video during driving. Also purpose for evidence of an accident.
- X200FHD does not however guarantee that all accidents are recorded. Minor shock may not detect sensor to record.
- WinyTechnology shall not be liable for any loss or damage to data or to the product which may be caused by accident or impact.
- All rights vested in the design and software of X200FHD are the property of Winy Technology Co., Ltd. and protected by the Copyright Law.
- X200FHD may change without notice for further function improvement.
- This User Manual is published based on the current state of the product, and may contain typographical errors or omissions.
- Contents of this User Manual may be modified, changed or supplemented without notice for further improvement.

2-1. Product Feature

• High Quality Lens and High Image Quality Resolution support

- Front 2.2 Mega Pixel / Rear 2 Mega Pixel image sensor mounting
- Wide mega lens
- FHD(1920×1080) High Image Quality Resolution and total 30fps(Front 25 + Rear 15).

• Various Recording Function and Video Data Acknowledgement

- Touch LCD display apply, recording image and recorded image can be confirmed on LCD
- Normal, Manual, Event, Motion and auto change to Parking recording mode
- Driving records can be stored with GPS data. (optional)
- G sensor built-in Automatic parking recording mode change and event recording mode.
- External video output. (real-time video image can be checked in another monitor)
- Configuration setting is available on LCD menu.
- PC viewer program are provided to change various setting values and map data can be checked when using GPS. (In the general video player (e.g. Windows media player), recorded video can be played)
- SD card can be formatted as the product itself, without connecting to a PC.
- Each capacity of a normal / event/ motion folder can be set in PC Viewer.

• High Quality Voice Record and Voice Guidance

- Operating instructions service by voice guidance
- Voice recording On/Off function and speaker output On/Off function.
- High performance microphone built-in

• Back-up battery and Car constant power discharge protection function

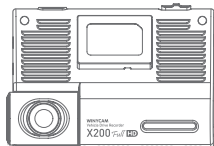
- Stored recorded image safety by built-in high-capacity capacitor when power is off.
- Car constant power discharge protection function (Selectable ON/OFF on viewer, Not required another equipment for this function)
- Consume less than 2.5mA when power shutdown (Based on 12V)
" When using car constant power discharge protection functions, If user car voltage is 12V and the voltage of less than 11.8V is maintained for more than 10 minutes the product power will be shuts-off " (Note: Shutdown time depend on the Type of Car and car condition.)

• Other

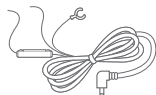
- Soft look and emotional design. (easy removable body)
- Security LED light are mounted on front body (LED Lighting function On/Off can be set in PC viewer / LCD menu)

2-2. Package

• Standard Package



X200FHD Body



Null Cable



Cable Clip



3M tape for bracket



Bracket



USB Card Reader



Micro SD Card



Rear Camera



Rear Camera
Video Cable

• Option Accessories



GPS Module



Cigar Lighter



AV - OUT cable

- The viewer program is stored in Micro SD card.

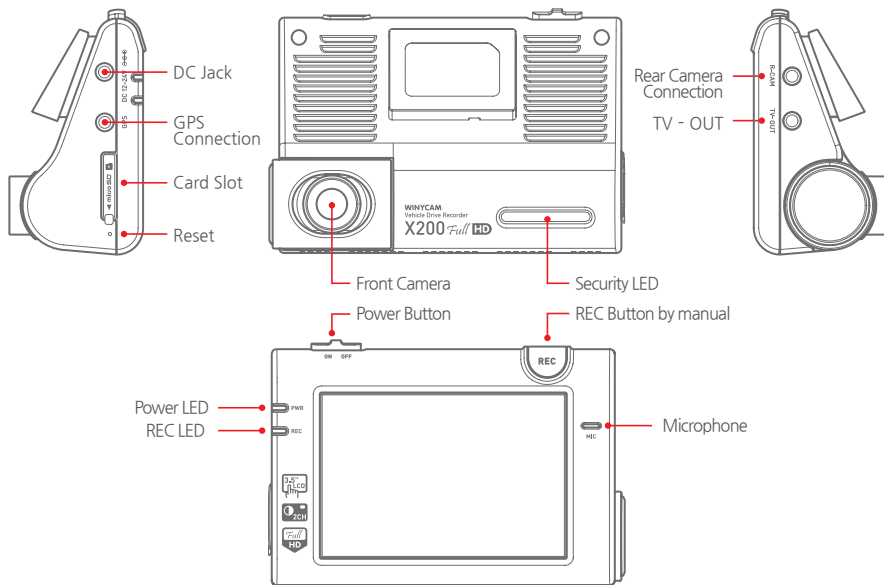


Note

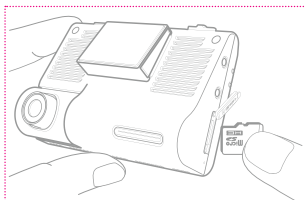
Viewer Please save PC Viewer program in advance in the computer, etc. so that the program can't be deleted. (If the program is lost, please download from Winycam website.)

- The packaged product picture of the user manual may differ from the actual product.
- The video cable can be purchased separately and used after verifying the PLUG Pin specification of Navigation AV IN.
- Video input type is different and check the user manual of monitor.

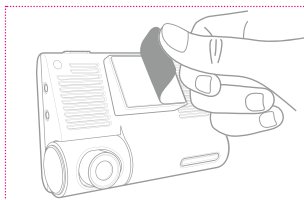
2-3. Product Parts



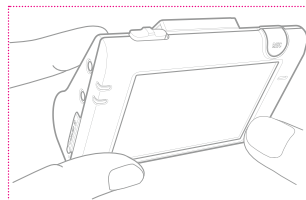
3-1. X200FHD Front Camera Installation



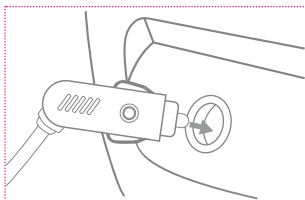
1. Insert Micro SD card to X200FHD SD card slot.
(Check the SD card direction)



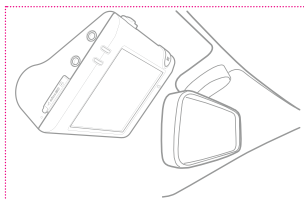
2. Remove the protect sticker.



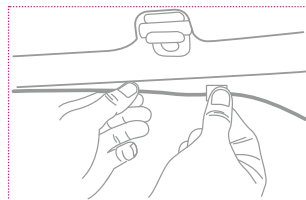
3. Attach the X200FHD in place on windshield.



4. Connect packaged cigar lighter to a cigar socket.

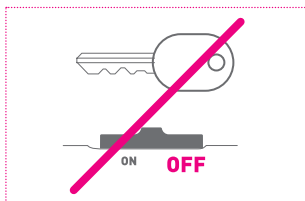


5. Adjust the angle of body and fix it.
(Adjust the angle of camera so that the horizon can be shown above the true center of screen.)



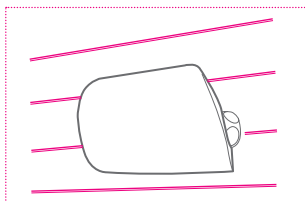
6. Arrange a power cable.

3-2. Installation of Rear View Camera



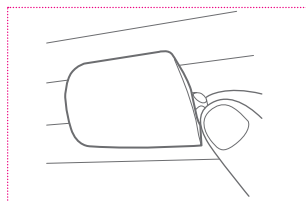
1. Shutdown a car battery and power

Shutdown a car battery and power off X200FHD first before installing a rear camera.



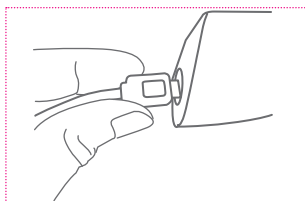
2. Install a rear camera

Remove a protect sticker and attach a rear camera in proper location in windshield.



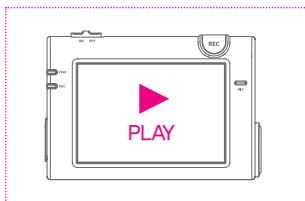
3. Adjust a rear camera angle

After attached a rear camera, adjust an angle. Adjust angle is e right angle to lens face or little downward facing.



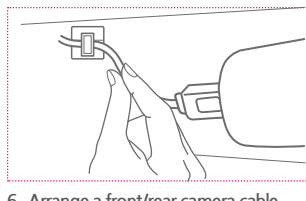
4. Connect video cable

Connect a rear power /video cable to a rear camera and a TV-Out jack on front camera



5. Check an operation

After connecting a power/video cable, Please check the recorded image that is stored in SD card if X200FHD can record properly.

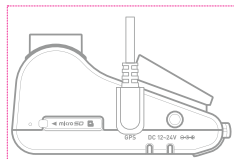


6. Arrange a front/rear camera cable

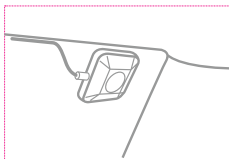
After checking recording operation, well-arrange a cable.
If you embed cable to car wall, please check cable connection. Also after embedded double-check if X200FHD can record properly.

3-3. External GPS/TV-OUT Cable Installation

► External GPS Installation

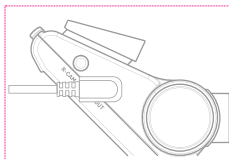


Connect External GPS to GPS connection on X200FHD body.

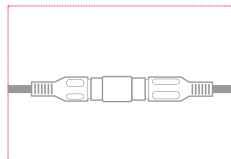


Attach GPS module at well visual place and tidy up a cable.

► TV OUT Cable Installation



Connect a TV-Out cable to the TV-Out jack on a X200FHD body.



Connect a TV-Out cable to AV-IN jack your car navigation.

! Caution on GPS Installation

- GPS module may be affected by main body or by other electronic devices if it is too close each other. Keep a distance as much as possible.
- The receiving signal may become poor depending on the climate, satellite status and geography in the neighborhood.
- The receiving signal may become poor if the windshield is heavy sun-coated or fixed with metallic materials.

! Caution on TV – OUT Connection

- When connecting to your Car Navigation, you need an applied Car Navigation video cable.
- With a specific Car Navigation, installation may be restricted, and/or extra service charge may be incurred.

3-4. How to record

1. **Record** : X200FHD is automatically boot at power on, and a constant(normal) recording starts as an initial recording mode.
2. **Recording Mode** : it is classified into driving recording mode and parking (motion) recording mode
3. **Recording Method** : it is classified into a Normal recording, event recording, motion recording.

※ For automatic recording and manual recording methods, please refer the below table.

REC Mode	REC Method	Auto REC Mode	Manual REC Mode (Button Control)	REC Time	Recording folder
Driving Mode	Normal REC	-	-	Set 30 / 60 sec in configuration	Normal
	Event REC	In G-sensor detect shock	One short press button		Event
Parking (Motion) Mode	Motion REC	In G-Sensor is not detected for more than 10 minutes Auto change to a motion REC mode.	-	10 sec + 30 sec before Event/Motion detect.	Motion
	Event REC	In G-sensor detect shock	One short press button		Event

- ※ If you want to change REC mode by manual, please press REC button or go to “Quick Menu” and select (Driving / Parking).
- ※ After changed to Parking mode, LCD will be on for 30sec nevertheless you set screen saving time as 30se/60sec/always.
- ※ When turned to “Parking Mode” G-sensor sensitivity will be more sensitive than driving mode.

3-5. LED Operation

Item	CH	Front LED	PWR LED	REC LED
Booting	-	ON	Red lighting ON	Red lighting ON
FW update	-	ON	Green lighting ON	Green lighting ON
Normal REC	1CH	1sec ON / OFF	Red lighting ON 0.5 / OFF 2.5	Red lighting ON/OFF based on audio REC setting
	2CH		Green lighting ON 0.5 / OFF 2.5	
In detect a shock (Event REC)	1CH	0.5 sec ON / OFF	Red lighting ON 0.5 / OFF 0.5	
	2CH		Green lighting ON 0.5 / OFF 0.5	
Parking REC	1CH	0.25 sec ON / OFF	Red/Green flashing interval at 0.5 sec	
	2CH			
Parking REC stanby	1CH	Cross flashing 3LEDs right- left interval at 0.5 sec (1, 2, 3, 3, 2, 1, ...)	Red/Green flashing interval at 1.5 sec	
	2CH			
Menu	1CH	OFF	Red lighting ON	
	2CH		Green lighting ON	
No SD Card (Including other error)	-	OFF	Red flashing interval at 0.5 sec	Red flashing interval at 0.5 sec

※ GPS Icon : when GPS dose not connect, Icon color turn to gray color. And when GPS signal receive properly, Icon color turn to white color.

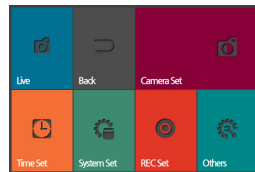
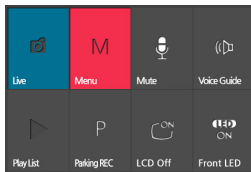
3-6. Voice Guide

Situation	Voice Guide
Remove SD card / SD card Error	“ Please check your SD card. ”
Firmware Update Start	“ The firmware update is starting. ”
Firmware Update Completed	“ The firmware update has been completed. ”
Constant (Normal) Recording Start (In booting)	“ Constant Recording will start. ”
* Event Recording Start (In booting)	“ Event Recording will start. ”
Parking Recording start	“ Parking Recording will start. ”
Recording end	“ The Recording will end. ”
Alarm tone in a Rear Camera disconnect (the error for 2CH REC)	“ Ding-Dong, Ding-Dong ”

※ Only when event REC mode is set in the configuration, the voice guiding "event recording will start" will announce

3-7. LCD Configuration

※ All configuration can be set in LCD menu.



	Menu	Function
Quick Menu	Live	Live Image
	Menu	Setting Menu
	Mute	Voice REC ON/OFF
	Voice Guide	Speaker ON/OFF
	Play List	Playback List
	Driving/Parking REC	Set N(Driving), P(Parking) REC
	LCD Off	Off LCD (On LCD if touch anywhere)
	Front LED	LED On/Off
Time Set	Time Set	Set Time on X200FHD
	Standard Time Set	Set Standard Time
	Summer Time	Set Summer Time
System Set	Cut Off Voltage	Set voltage for car constant power discharge
	Auto LCD Off	Normally off after 30sec / on 60sec
	TV-OUT	Set TV out format (NTSC/PAL)
	Speaker Volume	Set Speaker Volume

	Menu	Function
REC Set	Driving/Event REC	Set REC Mode
	Front Video Quality	Set Front Video Quality
	Rear Video Quality	Set Rear Video Quality
	Drive REC Time	Set Rec Time (30/60sec)
	REC CH	Set REC Channel
	Auto Parking Mode	Set Auto Parking Mode Change
	Mic Volume	Set REC Volume
	OSD	OSD On/Off
	Shock Level	Set Shock Sensor Level
	Motion Level	Set Motion Sensor Level
Others	System Info	Display System Information
	FW Upgrade	FW Upgrade Function
	SD Card Format	Format Micro SD Card
	Touch Calibration	Calibrate Touch Screen
	Factory Init	Initialize Configuration
Camera Set	Camera Set	Adjust Brightness, Contrast, Chroma on Camera

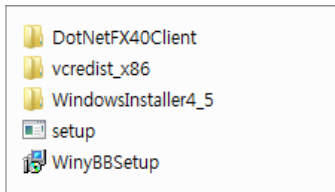
3-8. PC Original Viewer Program Installation

1. System Requirements

- Windows XP(32bit), Windows Vista(32bit), Windows7(32/64bit), Windows8(32/64bit)
- Pentium4 2.8GHz & RAM over 1GB.
- Display monitor resolution: 1024 X 768
- DirectX Support (WPF)

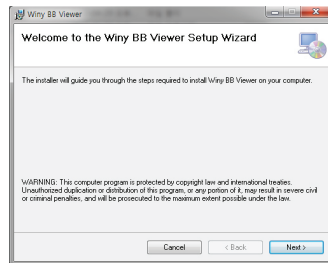
2. Install

- Playback program is in packaged Micro SD card.
- Insert this SD card into the USB card reader and connect to the computer.
- An executable file is in the SD card as below figure.
- If you run “**setup.exe**”, Winy BB Viewer will be installed. And then, installation will be continued according to the installation sequence of setup dialog box.

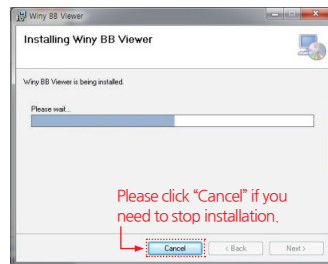


※ Installation may take long depend on PC Usage environment.

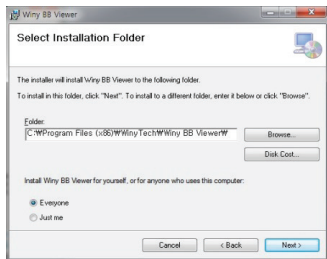
1. NEXT



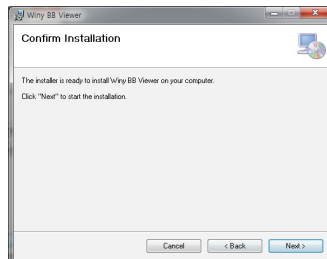
4. Installing



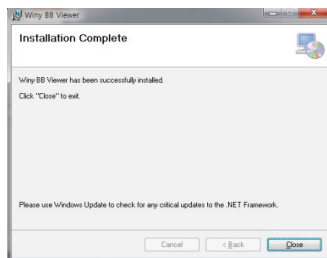
2. Select file location and click "Next"



3. NEXT



5. Complete installation



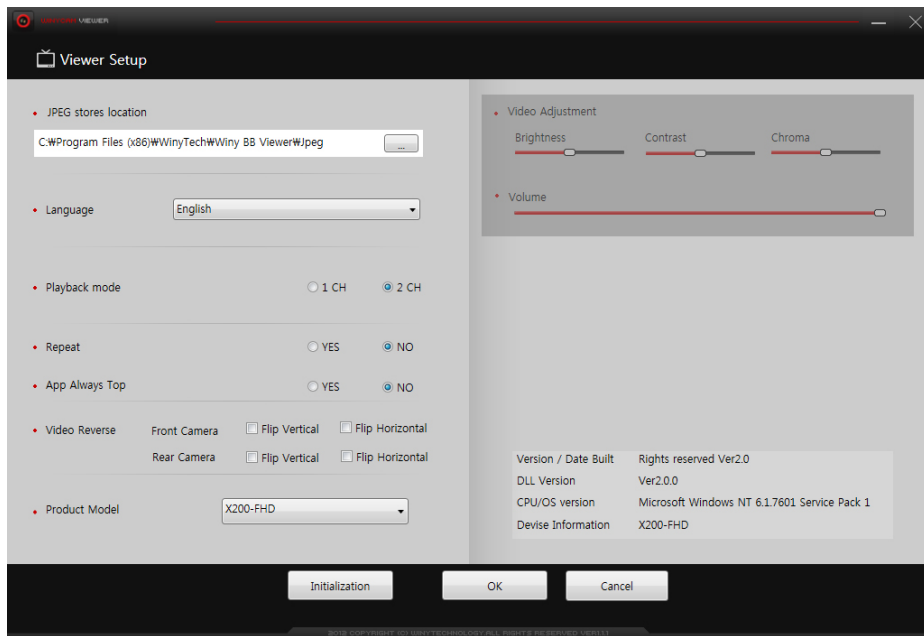
※ If viewer program is lost accidentally, please visit our website [winycam-eng](http://winycam-eng.com) and download to the SD card

3-9. PC Original Viewer - Screen Configuration



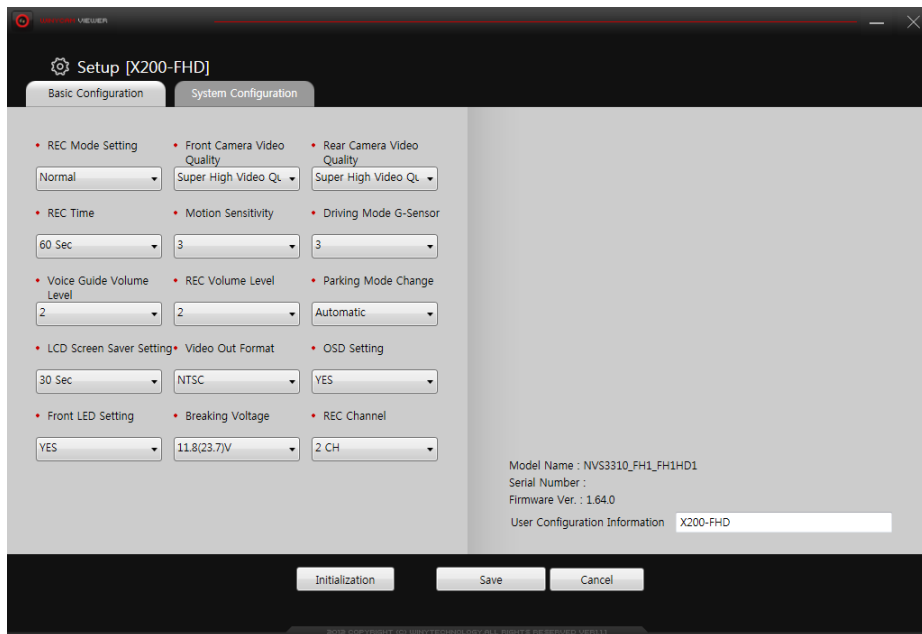
Item	Function	Item	Function
①	1CH / 2CH select screen	⑩⑥	Fast-Rewind
②	Viewer Configuration	⑩⑦	Playback or Pause
③	System Configuration	⑩⑧	Stop
④	Print	⑩⑨	Fast-Forward
⑤	Screen Capture	⑩⑩	File Skip
⑥	Zoom	⑩⑪	Control Volume
⑦	Play List/Map Button	⑩⑫	Total File Time/Playback Time
⑧	Playback File Location	⑩⑬	Brightness/Contrast/Chroma
⑨	REC file list / Map Display	⑩⑭	GPS signal condition
⑩	Playback Video Image	⑩⑮	Driving speed
⑪	Playback Control	⑩⑯	Latitude/Longitude
⑫	Full Screen	⑩⑰	G-sensor information
⑬	Flip Horizontal	⑩⑱	Split image
⑭	Flip Vertical		
⑮	File Skip Back		

3-10. PC Original Viewer - Viewer Configuration



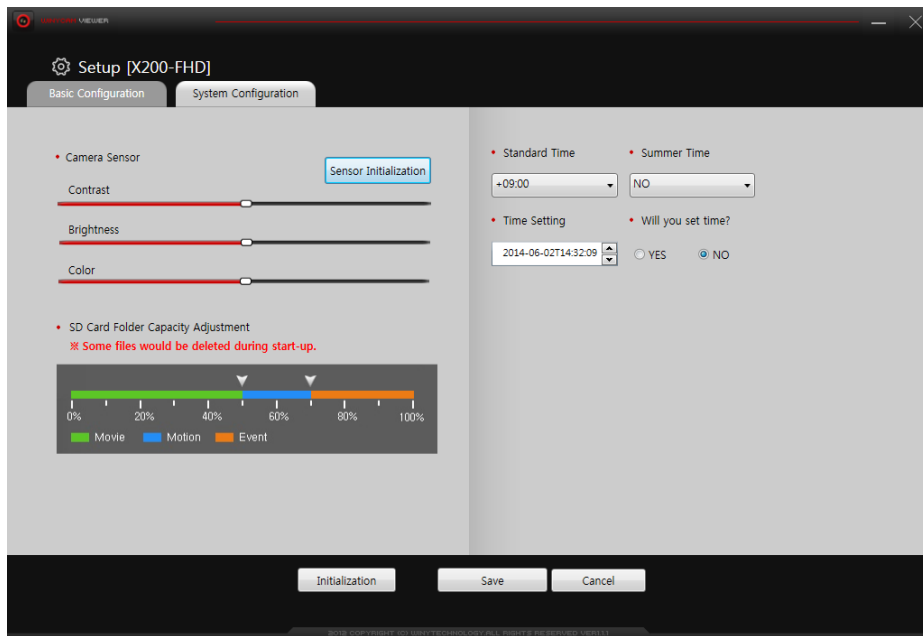
Item	Function
JPEG stores location	Set location for captured JPEG image.
Language	Select language.
Playback mode	Select display channel.
Repeat	Select repeated playback.
App Always Top	Select App is always the top of another window.
Video Reverse	Video can reverse from side to side and up and down
Product Model	Select the model.
Video adjustment	Control playback speed
Volume	Control recording volume level

3-11. PC Original Viewer - Configuration 1



Item	Function
REC Mode Setting	Select the recording mode
Front Camera Video Quality	Select video quality in a front camera
Rear Camera Video Quality	Select video quality in a rear camera
REC Time	Select recording time for each file
Motion Sensitivity	Select a motion sensitivity level
G-Sensor	Select a shock sensor sensitivity level
Voice Guide Volume Level	Select voice guide volume level
REC Volume Level	Select a recording audio level
Parking Mode Change	Select a parking mode auto-change function
LCD Screen saver Setting	Select LCD screensaver function
Video Out Format	Select TV-Out format
OSD Setting	Select OSD out on LCD
Front LED Setting	Select front security LED function
Breaking Voltage	Select a breaking voltage for a constant power discharge protection function
REC Channel	Select a recording channel

3-11. PC Original Viewer - Configuration 2



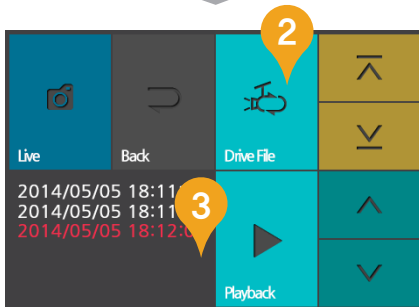
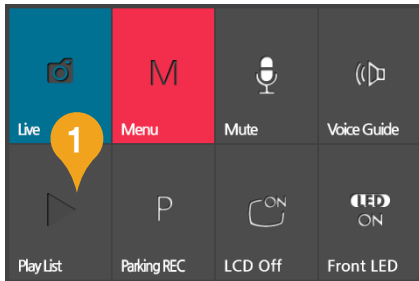
Item	Function
Camera Sensor	Select Brightness, Contrast, Chroma. Back to default value after click sensor initialization
SD Card Folder Capacity Adjustment	Select the capacity of each recording mode in SD card
Standard time	Auto-apply an actual location when using GPS
Summer Time	Select apply a summer time
Time Setting	Apply set time to X200FHD

3-12. Configuration Default Setting

Item	Setting Value
REC Mode Setting	Normal
Front Camera Video Quality	Super High Video Quality
Rear Camera Video Quality	Super High Video Quality
REC Time	60 sec
Motion Sensitivity	3
G-Sensor	3
Voice Guide Volume Level	2
REC Volume Level	2
Parking Mode Change	Auto
LCD Screen saver Setting	30 sec
Video Out Format	NTSC
OSD Setting	YES
Front LED Setting	YES
Breaking Voltage	11.8(23.7)V
REC Channel	2CH

Item		Setting Value
Camera Sensor	Contrast	Middle
	Brightness	Middle
	Color	Middle
SD Card Folder Capacity Adjustment (%)	Movie	50
	Motion	20
	Event	30
Standard Time		Seoul, Korea
Summer Time		NO
Time Setting		NO

3-13. Playback (Black box)



NO.	Item	Display	Description
1	Playback	Icon	Display REC List
2	Normal /Event /Motion	Tab	Each REC file list display tab
3	REC File list	List	REC File list that is selected tab
4	Playback REC	Window	REC video playback window
5	LIVE	Button	Back to list
6	Front /Rear	Button	Toggle front/Rear video display
7	Former file	Button	Playback Former file
8	Playback	Button	Playback REC file
9	Next file	Button	Playback Next file
10	Back	Button	Back to list tab



3-14. Playback (Standard video player)

1. Remove a SD Card from X200FHD

- Open a SD Card slot cover and press softly, then a SD Card can be removed easily.

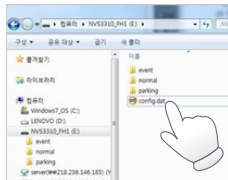
2. Connect a SD Card to PC

- Insert a SD card to SD Card Reader or adapter, and connect it to PC.



3. Playback

- Open a removal disc, you can see each folders. And click files to playback which is stored in each folders.



- Each recorded video is saved in below folder automatically.
Normal : Constant record
Event : Shock sensor record
Motion : Motion sensor record (Parking mode)
• GPS Information is displayed in the original viewer.



You can check only front REC when playing by standard video player.

3-15. Playback (PC original viewer)

1.~ 2. Same method to playback as a standard video player.

3. Original Viewer Program

- Click icon for the original viewer



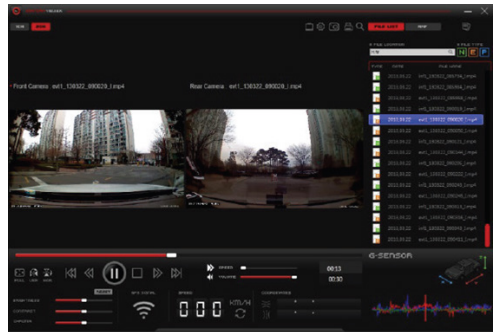
4. Find a REC file location

- Click "FILE LOCATION" in original viewer on upper right. Choose file location, video file list will be shown



5. Playback

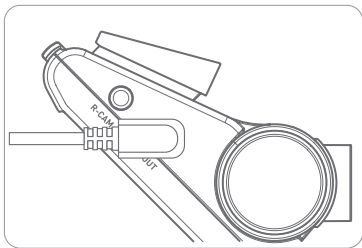
- Click
N : Normal REC file list
E : Event REC file list
P : Parking REC file list



3-16. Playback (TV/Car Navigation)

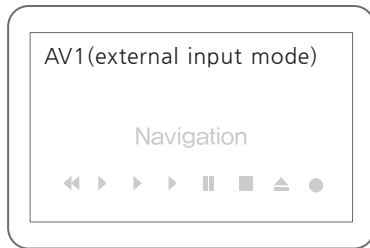
1. Connect TV Out cable

- Connect TV Out cable to TV-OUT terminal on the product.
- Connect TV Out cable to video input terminal on the TV /Car navigation.
(TV Out cable : Option)



2. Set the video input mode

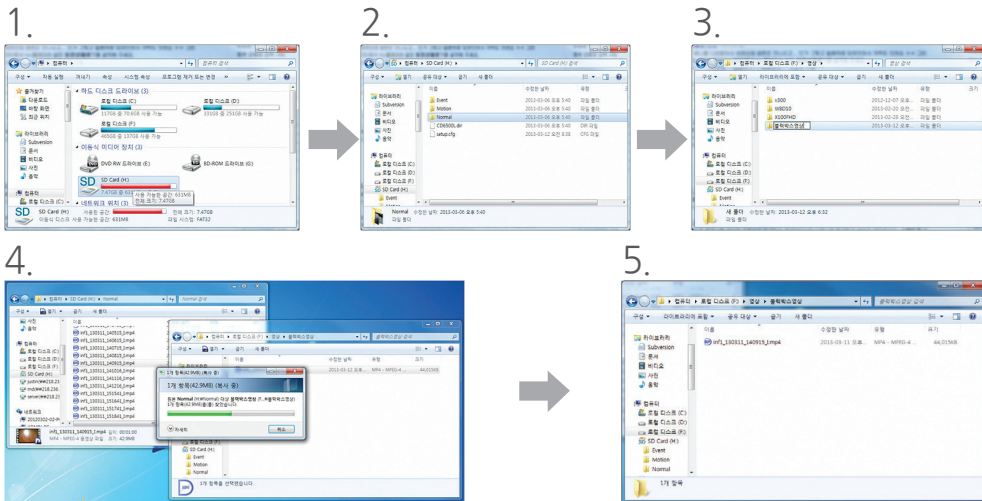
- Set the video input mode on TV/Car navigation first and playback video for real-time monitoring
- Real-time recording image ONLY.



- Available only TV/ Car navigation has external input terminal.
Please check the TV/Car navigation supplier for an external monitor cable.
- Mode change method is different for each modes, please refer user manual of TV/Car navigation.
If remove or insert TV Out cable during recording, recording will end and start reboot.

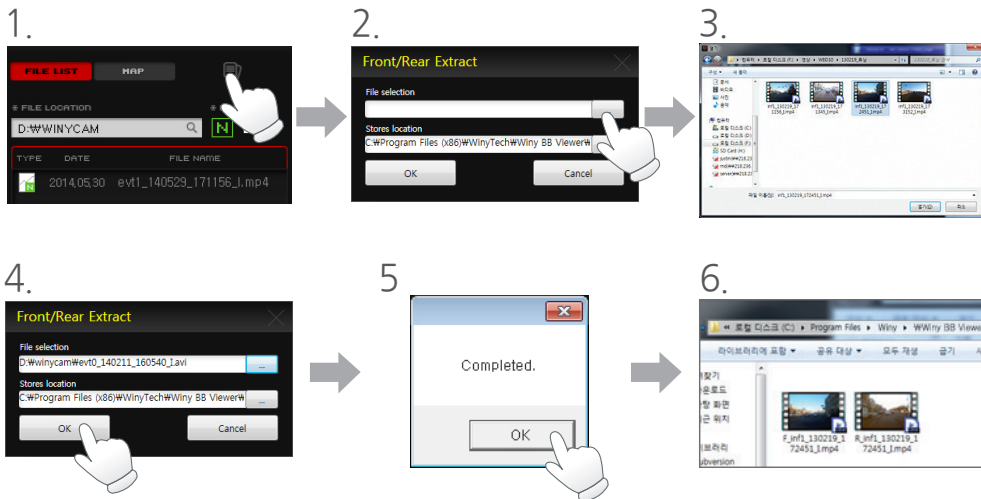
3-17. To save video file on your PC

1. Enter to removal disc after insert SD card to your PC.
2. Go to the folder where recorded video files are stored.
3. Create the new folder in same location.
4. Drag the particular file to the new file to copy. (If you drag a folder, the whole folder will be copied.)



3-18. To separate recorded video files

1. Press "Front & Rear Extract" button on the original PC viewer program.
2. Select a video file to separate and click "OK" button.
3. Stored separated file in "C:\Program Files\BlackBoxViewer\BlackBoxViewer\Video"



3-19. Firmware Upgrade

1. Auto Firmware Upgrade

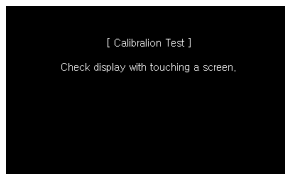
- 1) Remove the SD card from the black box after turning off the power completely.
- 2) backup all files that are stored in the files to your PC.
- 3) Format a SD card on PC. (Please refer “how to format” in the quick guide)
- 4) Download the latest firmware from our website (<http://winycam-eng.com>) and copy to a SD card.
- 5) Insert the SD card to X200FHD. After power ON then firmware will be updated automatically.
- 6) During firmware updating, a voice guide will be announced and updating message will be displayed on LCD.
- 7) When the firmware update is completed, X200FHD will be initialized and a voice guide will be announced

3-20. Firmware Upgrade - Touch Calibration

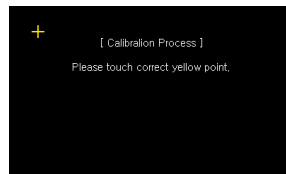
► How to calibrate scree after booting



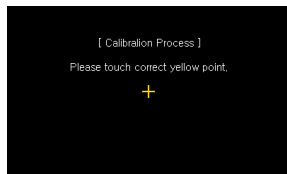
1. Loading Logo will be up after a firmware is completed.



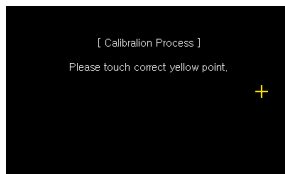
2. Touch a screen in any point.



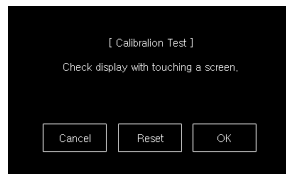
3. Touch a yellow dot correctly.



4. Touch a yellow dot correctly.



5. Touch a yellow dot correctly.



6. Touch anywhere except button and confirm calibration is completed.



Note

- If you touch wrong point during calibration, press REC button. Then it will be initialized and loading screen will be shown. Keep pressing REC button, a calibration button can be skipped.

- **OK** : Completed calibration and turn to Normal REC mode.
- **RESET** : Go back to a test calibration screen.
- **CANCEL** : uncompleted a calibration and turn to Normal REC mode.

3-21. SD card format & Set breaking voltage

1. Micro SD Card Format

1) On PC

Connect a Micro SD memory card to your PC, and click on 'My Computer'



Right-click 'Removable Disc' and select on 'Format' from the menu.



Set Allocated value as 64KB and press "Start" to format.



Note

- User manual and viewer program are stored on packaged Micro SD card, please note all data will be deleted if you format a Micro SD card.
- Please backup user manual and viewer program on your computer before you format a Micro SD Card.
- Please set FAT32 for file system when you format a Micro SD Card.
- If you format as NTFS or another format, Micro SD card will not be recognized and product can not work correctly. We recommend allocated value 64KB when you format a Micro SD Card.

2) Format on X200FHD

Format a Micro SD Card on a device. (Menu > Others > SD Card Format)

2. How to install Constant power discharge protection function

- This device has the built-in car constant power discharge protection function, and therefore does not require an extra device to cut off constant power. With the configuration on LCD or PC Viewer program, you can set the Cut Off Voltage for the constant-power-off function.

1) Configuration

Menu > System Set > Cut Off Voltage

2) PC Viewer Program

Configuration > Breaking Voltage There are some differences depend on a type of car and car age.
(Cut off Voltage : 11.4(23.1) / 11.6 (23.4) / 11.8(23.7) / 12.0(24.0) / 12.2(24.3) / Off)

3-22. REC Time

► Default set

CH	Video Quality	Camera	16GB			32GB		
			Normal(50%)	Event(30%)	Motion(20%)	Normal(50%)	Event(30%)	Motion(20%)
1CH	Super High	Front	78	52	34	156	104	69
	High	Front	117	78	52	235	157	104
	Normal	Front	133	88	59	266	177	118
2CH	Super High	Front/Rear	69	45	30	137	91	61
	High	Front/Rear	109	73	48	219	146	97
	Normal	Front/Rear	125	83	55	251	166	111



Note

- **By time** : When the memory is full, the oldest file will be automatically deleted.
- **By mode** : Total record files are stored by your setting rate on “SD card Folder Capacity Adjustment”
When memory is full on a particular recording mode, the oldest file will be automatically deleted on particular recording mode. Stored file may also be deleted.

3-23. Specification

Item	Specification	Item	Specification
Camera	Front / Rear Camera 2.2M Pixels	Video Output	NTSC / PAL Composite
G-Sensor	3D Shock Sensor	Voice Recording	Built-in high sensitive microphone
GPS	External GPS Module (Option)	Voice Guidance	Built-in speaker
Video Compression	H.264/AVC	Recording Media	Micro SD Card (SDHC)
Audio Compression	PCM	Power Input	DC 12V ~ 24V Free Voltage
Recording Channel	2 Channel	LCD	3.5" TFT LCD, 480 X 320 Resistive Touch Display
Recording Resolution	Front : FHD (1920 x 1080) Rear : HD (1280 x 720)	Size/Weight	104(W) x 71(H) x 36(D)mm ARO 132g (Bracket excluded) 138g(Bracket included)
FPS	1CH : Front 30FPS 2CH : Front 25FPS /Rear 15FPS	Storage Temperature	-40℃ ~ +85℃
Image Quality	1CH : Super High / High / Normal (bitrate 12/10/8Mbps - FHD Standard) 2CH: Super High / High / Normal (bitrate 6/5/4Mbps - HD Standard)	Operating Temperature	-20℃ ~ +60℃

1. Power is not turned on.

※ Check once again if the power cable is properly connected. If the problem is not solved, please contact manufacture.

2. The map is not shown when a video is played on a PC original viewer program.

※ Check your Internet connection. Check if your Internet Explorer is v7.0 or higher.

3. Power is connected, but LED is not lightning.

※ Check if the power cable is connected properly. Then if still LED dose not lightning, the product or the memory card may be defective. Please contact manufacture.

4. GPS signal dose not recognize. (GPS is sold separately.)

※ GPS signal reception may be interrupted temporarily depending on the environment and locations. Drive your car to other location where GPS signal reception is abled. Please wait 3-5 minutes in the GPS signal reception area.

If the signal still dose not recognized, please contact manufacture

5. The product does not recognize the memory card.

※ Remove the Micro SD memory card from X200FHD after power OFF, and check for any foreign material or abnormality around the connecting terminal. Format the SD memory card and try again. If the memory card is old, please replace with a new one.

• Precaution before use



Note

1. Please check for any defect on the product before installation. The Company shall not take responsibility for any cost or expense incurred as a result of the failure to check before installation.

2. If installation was held at a service center other than those designated by the Company, the Company shall not take a responsibility for cost or expense charged at such center.

3. If the constant power protect function is set 'OFF', monitoring during parking will be performed only for a certain period of time. If the vehicle battery voltage is lowered for self-protection, power to the device may be disconnected even in the Parking Mode disabling the recording.

4. The Micro SD card should be formatted every other week, as it may cause a recording error, a disabling saving file or playback error.

5. The Micro SD card is a consumable. Use of an aged SD card may cause error. Please replace on a regular basis.

6. When a car accident occurred, turn off power of the product immediately, remove the Micro SD card and save the accident file on your PC. If the file is erased due to the times away, the Company shall not take responsible.

Warranty

1. The products are manufactured through the strict quality control and inspection process.
2. The defect occurring in normal use of user within the warranty period will be repaired free of charge.
3. If the warranty period has passed, we will repair by paid charge.
4. Please take this "Warrantee" when you request repair.
5. Please keep this "Warrantee" because we will not be able to re-issue this warrantee note.

Model Name	X200FHD	Product	Vehicle Drive Recorder / Rear Camera		
Serial No		Purchase date	YY	MM	DD
Customer		TEL			
Address					
Purchase from		TEL			

■ Warranty Details (Conditions)

1. Free Service

Product : 1 Year from purchase date.

Micro SD Card : 6 months from purchase date

(if purchase date is not confirmed, it should be counted from manufacture date of SD card.)

2. Paid Service

1) If the warranty period has passed.

2) If a failures caused by carelessness using (drop, flooding, shock, breakage, excessive operation)

3) If failures caused by natural disasters (fire, lightning, flood damage, etc.

4) Failures caused by the malfunction of power in use and connected equipment.



Please keep this "Warrantee" because we will not be able to re-issue this warrantee note.

WinyTechnology Co., Ltd.

www.winycam-eng.com